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SUBJECT: Responds to NRC 881130 ltr re violations noted in Insp Rept  
 50-529/88-31.

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## Arizona Nuclear Power Project

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102-01075-DBK/TDS

December 23, 1988

DONALD B. KARNER  
EXECUTIVE VICE PRESIDENT

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Reference: Letter from R. J. Pate, Chief, Reactor Safety Branch, U. S. Nuclear Regulatory Commission to Arizona Nuclear Power Project, Attn. D. B. Karner, Executive Vice President, dated November 30, 1988.

Dear Sir:

Subject: Palo Verde Nuclear Generating Station  
Unit 2  
Docket No. STN 50-529 (License No. NPF-51)  
Reply to a Notice of Violation - 529/88-31-01  
File: 88-070-026

This letter is provided in response to the routine inspection conducted by Messrs. T. Polich, D. Coe and G. Fiorelli from September 18 through November 5, 1988. Based upon the results of this inspection a violation of NRC requirements was identified. The violation is discussed in Appendix A of the referenced letter. The violation and ANPP's response are provided in Attachment A to this letter. The description and implementation schedule for the Incident Investigation program requested in the referenced letter are provided in Attachment B to this letter. A selected reiteration of the findings and observations made during the NRC's review of the draft Incident Investigation Program, as documented in paragraph 12c of the inspection report, and a brief discussion of actions taken by ANPP to resolve the concerns are provided in Attachment C of this letter. The additional information requested and a discussion of other concerns identified in the referenced letter are provided in the following paragraphs.

The referenced letter stated that based upon observations of the inspectors there were indications that ANPP personnel are not consistently adhering to procedural requirements. ANPP recognizes that a lack of procedural adherence is a concern that must be continually monitored and that the necessity for strict procedural adherence must be continually reemphasized. ANPP firmly believes that all employees must understand management's expectations for procedural adherence and know that personnel errors as a result of noncompliance with an approved procedure can not be tolerated.

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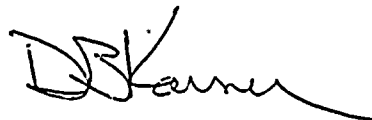


ANPP management is committed to continue to reemphasize the necessity for procedural adherence through the various training classes and through periodic project publications. As in the past, deviations such as those identified in the inspection report shall be dealt with by administration of retraining, counseling, or disciplinary action as appropriate. In addition to these continuing actions, ANPP anticipates that the implementation of the upgraded Incident Investigation Program and the use of investigative techniques such as the Human Performance Evaluation System (HPES) will enable ANPP management to better understand potential causes of procedural violations and implement more aggressive corrective action plans aimed at the underlying causes of procedural violations.

The referenced letter also requested an assessment of the adequacy of the procedure governing the control of hot work authorization permits. The assessment of the procedure's adequacy was conducted as part of an investigation into the event. The results of the investigation determined that not reissuing or revalidating the hot work permit was not a violation of the instructions as written. However, it was apparent that the latitude permitted by the procedure did not implement management's intended directions. As a result, a formal procedural review is being conducted, and the appropriate revisions are currently scheduled for implementation in March, 1989.

ANPP recognizes that a lack of procedural clarity or specificity can in itself lead to procedural noncompliance or a failure to implement management's intended directions. As discussed in the preceding paragraph not revalidating the hot work permit is an example of this type of situation. To address this concern, the Executive Vice President of ANPP issued a memo on December 30, 1988, to all personnel reemphasizing that if they encounter any procedural controls that they believe are unclear or potentially misleading they are to stop the activity and obtain clarification from their immediate supervisor. Each employee that encounters this type of situation will be required to submit a procedure feedback form to ensure the procedure is clarified for future use. The Vice President of Nuclear Production issued a memo on December 6, 1988 to all Nuclear Production Personnel which discusses the lessons learned from recent events and reemphasizes the necessity for procedural adherence.

ANPP believes that the actions described in this letter and the attachments hereto will resolve the identified concerns. If you should have any questions regarding this response, contact Mr. Timothy Shriver of my staff at (602) 393-2521.



DBK/TDS/kj

Attachments



NRC Document Control Desk  
Page 3

102-01075-DBK/TDS  
December 23, 1988

cc: J. G. Haynes (all w/attachments)  
J. B. Martin  
T. J. Polich  
M. J. Davis  
T. L. Chan  
A. C. Gehr





ATTACHMENT A  
NOTICE OF VIOLATION

Arizona Nuclear Power Project  
Palo Verde Unit 2

Docket No. 50-529  
License No. NPF-51

During an inspection conducted on September 18 through November 5, 1988, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1988), 53 Fed. Reg. 40019 (October 13, 1988), the violation is listed below:

Technical Specification 6.8.1 states, in part: "Written procedures shall be established, implemented, and maintained covering ... the recommendations in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978..."

Regulatory Guide 1.33, Revision 2, February 1978 recommends "Procedures for Performing Maintenance".

Regulatory Guide 1.33, Revision 2, February 1978, is implemented in part by ANPP procedure 30DP-9MP01, Revision 0, entitled "Conduct of Maintenance," Section 3.8, which states in step 3.8.6: "Work instruction steps, sections of steps and data sheets shall be properly documented at the time of performing the step or as soon thereafter if conditions do not permit."



ATTACHMENT A  
NOTICE OF VIOLATION

(Continued)

Contrary to the above, on October 18, 1988, Unit 2 Train "A" diesel generator maintenance progressed to the disassembly of the temperature control valve with no corresponding documentation of previously completed steps in the work instruction.

This is a Severity Level IV Violation (Supplement I).



ATTACHMENT A

REPLY TO NOTICE OF VIOLATION 529/88-31-01

I. REASON FOR VIOLATION

On October 18, 1988, two (2) employees were assigned to perform maintenance on the Unit 2 Diesel Generator "A" in accordance with Work Order #320499. The employees reviewed the Work Order, verified and accepted the adequacy of the clearance, and obtained approval from the Assistant Shift Supervisor to commence work.

As discussed in the NRC inspection report dated November 30, 1988, an NRC inspector reviewed the Work Order during the performance of the task and observed that no work steps had been initialed as completed even though the work had proceeded to the disassembly of the thermostatic valve [Step seven (7) of the Work Order].

The Unit 2 Maintenance Manager discussed the event with the responsible individuals to determine the root cause and identify the appropriate corrective actions. Based upon the conversations held, it was apparent that the responsible individuals were fully aware of the requirements for the sign offs and management's expectations. Despite this fact the individuals neglected to sign the steps. As a result, it was determined that the root cause was inattention to detail by the responsible employee which led to the procedural violation.



ATTACHMENT A

REPLY TO NOTICE OF VIOLATION 529/88-31-01

(Continued)

II. CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

Upon identification of the omission, the responsible employees verified the completion of work and initialed the appropriate work steps. This action achieved full procedural compliance.

III. CORRECTIVE ACTIONS TAKEN TO AVOID FURTHER VIOLATIONS

A similar event occurred in Unit 2 on September 13, 1988 as discussed in the inspection report. On September 14, 1988 the responsible mechanics were given specific instructions by their Supervisor when Work Order steps were to be signed in accordance with the revised procedure. They were also informed that initial information steps and clearance steps were required to be signed prior to beginning work and that the remaining work steps would be signed after the completion of the work or as soon as possible after the work performance (e.g., work in radiation areas, high temperature areas, working with grease or oil could preclude the signing of steps immediately following the completion of work). Additionally the requirements for sign offs and management's expectations concerning this issue were discussed with Unit 2 maintenance personnel at special meetings conducted by the respective supervisors.





ATTACHMENT A

REPLY TO NOTICE OF VIOLATION 529/88-31-01

(Continued)

These actions were taken to ensure that responsible individuals fully understood the existing requirements. However, the recurrence of the similar event on October 18, 1988 indicated the need for additional actions. As a result, the two (2) employees involved in the work activity on October 18, 1988 were counseled concerning their responsibilities for signing completed work steps and were advised that recurrence of this type of error would result in the administration of disciplinary actions. Additionally, in order to ensure that management's expectations were fully understood by all Unit 2 Maintenance personnel, the circumstances surrounding the event on October 18, 1988 were discussed at Unit 2 Maintenance Department's weekly safety meeting. At this meeting interim guidelines for work sign-offs were presented and subsequently reinforced by a memo issued to Unit 2 Mechanical Maintenance personnel. These guidelines are:

- When two or more mechanics are assigned a Work Order, the foreman (or lead) will appoint one of the mechanics to be responsible for the sign-off of the Work Order steps.
- After the mechanic has completed the clearance walkdown and the Shift Supervisor has authorized work to begin by signing the Work Order, the



ATTACHMENT A

REPLY TO NOTICE OF VIOLATION 529/88-31-01

(Continued)

mechanic will meet with the foreman (or lead) who will perform a tailboard meeting and insure the preliminary Work Order steps have been signed. (The tailboard meetings will be performed as warranted, at the Supervisor's discretion.)

- During the performance of work, the mechanic will sign each Work Order step or groups of steps (depending on the Work Order format) upon completion of that step or as soon as possible thereafter if work conditions do not permit (e.g., radiation area, etc.).

From a project standpoint, the event and the requirements for completing the required sign offs were discussed with the maintenance personnel at the weekly safety meeting. Additionally, the responsible maintenance managers issued a letter to their respective supervisors. The letter directs the supervisors to meet with their personnel and conduct training briefings addressing topics which are directly applicable to this event. The briefings are designed to reinforce the "Conduct of Maintenance" requirements issued in August 1988 and to stress to all personnel the necessity for them to adhere to procedures or to stop the activity when this is not possible and obtain guidance from supervision before proceeding.



ATTACHMENT A

REPLY TO NOTICE OF VIOLATION 529/88-31-01

(Continued)

ANPP also concluded that changes recently made in the Work Control Program may have the potential to cause similar events due to a misunderstanding of the requirements or management's expectations. Although training which described the various work control revisions was conducted with maintenance personnel prior to the implementation of the revision, ANPP wants to ensure that the expectations are clearly understood by all responsible personnel. As a result, an outline of the major changes made to the work control program will be developed by the Standards Department. The outline will be provided to the Maintenance Managers to be used in presentations that will be given to the Maintenance personnel to ensure that the changes are clearly understood.

With respect to the involvement of the Quality Control (QC) inspector, which was also addressed as a concern in the inspection report, discussions were held with the responsible manager. These discussions revealed that the opinion of the QC inspector concerning his responsibilities for verification of the procedural step sign-offs is not consistent with that of QA/QC management. The failure of the inspector to fully understand and implement management's expectations is not considered to be a generic issue within the QA/QC organization. However, to ensure that the expectations were reinforced the event was addressed by "Quality Talks", a periodic project publication which discusses quality concerns and is issued to ANPP personnel. The



ATTACHMENT A

REPLY TO NOTICE OF VIOLATION 529/88-31-01

(Continued)

specific guidance provided was that QC inspectors will not sign-off inspection hold/witness points until all completed work steps requiring sign-offs preceding the hold/witness point are initialed as completed. This action will reinforce management's expectations and will verify procedural compliance with respect to the issue discussed in the notice of violation. As an additional action, the outline describing major procedural revisions discussed in the preceding paragraphs will be provided to the QC organization to ensure that both the line organizations and the oversight group have a consistent understanding of the revised controls.

IV. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

As discussed in Section II of this response, the Work Order work steps were initialed after the omission was identified and the work was verified to be complete thereby achieving full compliance.

The maintenance personnel briefings to discuss the "Conduct of Maintenance" are scheduled to be completed in January, 1989.

The outline of the major changes made in the new Conduct of Maintenance procedure and presentation to all Maintenance Department and QC employees is scheduled for completion by March, 1989.





ATTACHMENT B

INCIDENT INVESTIGATION PROGRAM

On December 1, 1988 an NRC/ANPP management meeting was held to discuss issues pertinent to the Palo Verde Nuclear Generating Station. One of the topics discussed was the upgraded Incident Investigations Program. Portions of that presentation are reiterated in the following paragraphs as requested in the referenced letter.

PROGRAM DESCRIPTION

- A. The program integrates PVNGS investigation processes into a single program.
- B. The program consists of four categories of investigations, including lower level precursors, using formal investigation methods (MORT, HPES).
- C. The investigations will be directed by line management and conducted by trained personnel.
- D. The program provides for a review of the Investigation results by the Plant Review Board (PRB) for safety significant events.
- E. The program establishes time constraints for the completion of investigations.



ATTACHMENT B  
INCIDENT INVESTIGATION PROGRAM

(Continued)

F. The program establishes trending of recurring/causal factors and tracking of required corrective actions.

G. The program will improve event reporting timeliness to both ANPP management and the NRC.

The preceding description provides a generic overview of the upgraded program and is not intended to describe the details of the program's implementation. Upon final approval of the program a copy of the procedure will be forwarded to the NRC Regional Administrator.

The following is an updated schedule for the program implementation.

- |   |                          |
|---|--------------------------|
| A. Begin Program Preparation  | Completed: June, 1988    |
| B. Issue Initial draft for review   | Completed: July, 1988    |
| C. Incorporate comments provided by INPO during<br>during an assist visit | Completed: July, 1988    |
| D. Incorporate comments provided by the NRC                               | Completed: October, 1988 |



ATTACHMENT B

INCIDENT INVESTIGATION PROGRAM

(Continued)

- |    |   |   |
|----|---|---|
| E. | Issue final draft for review                                      | Completed: November, 1988                           |
| F. | Obtain program approval, issue procedures<br>and conduct training | Scheduled: December, 1988<br>through February, 1989 |
| G. | Complete implementation of the upgraded<br>program                | Scheduled: February, 1989                           |



ATTACHMENT C

NRC REVIEW OF INCIDENT INVESTIGATION PROGRAM

Paragraph 12c of the NRC inspection report transmitted by the referenced letter provides the results of a review of the Incident Investigation Program conducted by the NRC. Selected concerns/observations and a brief discussion of actions taken by ANPP in response to those items are provided in the following paragraphs:

NRC inspection report paragraph 12c (2) states; "Licensee management representatives stated during the course of the current inspection their intent that investigations of all events focus on a determination of root cause. This was not made clear in the draft program description or in the procedure covering the investigations of Category 1 and 2 events."

Discussion:

As discussed with members of the NRC Region V staff during the inspection and on December 1, 1988 at an ANPP/NRC Management Meeting one of the primary reasons for revising the investigation programs was to ensure that "low level" events are adequately investigated and that the root causes are identified and corrected. The current revision of the draft procedures clarified this position.





ATTACHMENT C

NRC REVIEW OF INCIDENT INVESTIGATION PROGRAM

(Continued)

NRC inspection report paragraph 12c (3) states; "Training in investigation methods/root cause techniques for individuals, other than System Engineers and STA's, who will be involved in investigations should be given high priority by management."

Discussion:

ANPP realizes that the quality of the investigations is dependent upon the abilities of the individuals assigned to conduct them. The current revision of the draft procedures specifically requires that individuals assigned to conduct the investigations be qualified (trained) in the proper investigative techniques they will employ. Based upon the proposed scope of the program, the training efforts will be an ongoing effort.



ATTACHMENT C

NRC REVIEW OF INCIDENT INVESTIGATION PROGRAM

(Continued)

NRC inspection report paragraph 12c (4) states; "Other licensees in Region V have found the formation of a small (4-6 person) dedicated root cause group with expertise in root cause methods to be beneficial in terms of taking a lead role in event evaluations/root cause determinations for significant events, and in assessing the adequacy of event evaluations/root cause determinations by all parts of the organization."

Discussion:

The current revision of the draft program establishes a group of individuals, who will be assigned within the STA group, whose function will be to coordinate the implementation of the program. These individuals will be responsible for overseeing the implementation of the program, for performing "significant" investigations and assisting in lower level investigations.



ATTACHMENT C

NRC REVIEW OF INCIDENT INVESTIGATION PROGRAM

(Continued)

NRC inspection report paragraph 12c (5) states; "It was not clear in the draft procedures reviewed that all action items resulting from event investigations will be identified for tracking to insure their completion and for periodic trending analysis."

Discussion:

A program similar to the one currently used to track corrective actions resulting from Human Performance Evaluation System Reports and Post Trip Review Reports will be utilized to uniquely identify all required actions and track them to closure.



ATTACHMENT C

NRC REVIEW OF INCIDENT INVESTIGATION PROGRAM

(Continued)

NRC inspection report paragraph 12c (6) states; "The resources impact of the proposed investigation program had not been addressed. This would appear particularly important in terms of the impact the program may have on the operations and other line departments."

Discussion:

As with the implementation of any new program the resource impact can only be estimated. If after full implementation of the program it is found personnel adjustments are required, the appropriate changes to present resource levels will be made.





ATTACHMENT C

NRC REVIEW OF INCIDENT INVESTIGATION PROGRAM

(Continued)

NRC inspection report paragraph 12c (7) states; "Senior management should make a special effort to communicate their support and their expectations of the proposed investigation program to the entire ANPP organization."

Discussion:

The direction to evaluate the existing programs and to develop the current draft program was provided by the Vice President of Nuclear Production in June of 1988. The entire development of the program was done under his direction. ANPP Management is fully committed to ensuring the success of this program and will ensure that their expectations are understood by all involved individuals.



ATTACHMENT C

NRC REVIEW OF INCIDENT INVESTIGATION PROGRAM

(Continued)

NRC inspection report paragraph 12c (8) states; "There does not appear to be a formal mechanism for the tracking and feedback of requests for changes to the training programs, similar to that which exists for requests for changes to procedures."

Discussion:

As stated in the inspection report no program currently exists for tracking and feedback of requests for changes to the training program similar to that used for procedure change requests. However, other programs do exist that provide that capability. Specifically 15GB-OTR01, Revision 0, "Systematic Technical Training -- Development" provides for the request of training assistance in various areas. This procedure is currently in the revision process for unrelated reasons and will be evaluated with respect to the comments provided during the inspection.



144

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